IN THE SPECIFICATION

Please replace the paragraph at line 4, page 19, with the following paragraph:

$$Y(o) = \left\lfloor \frac{(128 \times 2^{12}) + 1225 \times R(o) + 2404 \times G(o) + 467 \times B(o) + 2^{11}}{2^{12}} \right\rfloor - 128$$

$$Cb(o) = \left\lfloor \frac{(128 \times 2^{12}) - 691 \times R(o) - 1357 \times G(o) + 2^{11} \times B(o) + 2^{11}}{2^{12}} \right\rfloor - 128$$

$$Cr(o) = \left\lfloor \frac{(128 \times 2^{12}) + 2^{11} \times R(o) - 1715 \times G(o) - 333 \times B(o) + 2^{11}}{2^{12}} \right\rfloor - 128$$

Please replace the paragraph at line 9, page 19, with the following paragraph:

$$R(o) = \left\lfloor \frac{(128 \times 2^{12}) + 2^{12} \times Y(o) + 5743 \times Cr(o) + 2^{11}}{2^{12}} \right\rfloor - 128$$

$$G(o) = \left\lfloor \frac{(128 \times 2^{12}) + 2^{12} \times Y(o) - 1410 \times Cb(o) - 2925 \times Cr(o) + 2^{11}}{2^{12}} \right\rfloor - 128$$

$$B(o) = \left\lfloor \frac{(128 \times 2^{12}) + 2^{12} \times Y(o) + 7258 \times Cb(o) + 2^{11}}{2^{12}} \right\rfloor - 128$$

Please replace the paragraph at line 1, page 20, with the following paragraph:

$$Y(o) = (((128\langle\langle 12) + 1225 \times R(o) + 2404 \times G(o) + 467 \times B(o) + (1\langle\langle 11)))\rangle\rangle 12) - 128;$$
$$Cb(o) = (((128\langle\langle 12) - 691 \times R(o) - 1357 \times G(o) + 2048 \times B(o) + (1\langle\langle 11)))\rangle\rangle 12) - 128;$$
$$Cr(o) = (((128\langle\langle 12) + 2048 \times R(o) - 1715 \times G(o) - 333 \times B(o) + (1\langle\langle 11)))\rangle\rangle 12) - 128;$$

Please replace the paragraph at line 4, page 43, with the following paragraph:

$$Y(o) = \left\lfloor \frac{2 \times (x_M \times R(o) + (D - x_M - y_M) \times G(o) + y_M \times B(o)) + D}{2 \times D} \right\rfloor$$

$$Cb(o) = \left\lfloor \frac{\left\lfloor \frac{MAX_{RGB} + 1}{2} \right\rfloor \times 2 \times (D - y_M) - x_M \times R(o) - (D - x_M - y_M) \times G(o) + (D - y_M) \times B(o) + 1}{2 \times (D - y_M)} \right\rfloor$$

$$- \left\lfloor \frac{MAX_{RGB} + 1}{2} \right\rfloor$$

$$Cr(o) = \left\lfloor \frac{\left\lfloor \frac{MAX_{RGB} + 1}{2} \right\rfloor \times 2 \times (D - x_M) + (D - x_M) \times (R(o) + 1) - (D - x_M - y_M) \times G(o) - y_M \times B(o)}{2 \times (D - x_M)} \right\rfloor$$

$$- \left\lfloor \frac{MAX_{RGB} + 1}{2} \right\rfloor$$

Please replace the paragraph at line 1, page 45, with the following paragraph:

iYORS=((MAX_KAICHO+1)/2*1000 + 299*iRORS+587*iGORS+114*iBORS
    + 500)/(1000) - (MAX_KAICHO+1)/2
    $\doteq$ (
        (
        ((MAX_KAICHO+1)/2 <<bitSHIFT)
        + ((299<<bitSHIFT)+500)/1000*iRORS
        + ((587<<bitSHIFT)+500)/1000*iGORS
        + ((114<<bitSHIFT)+500)/1000*iBORS
        + (1 << (bitSHIFT-1))
) >> bitSHIFT
) -(MAX_KAICHO+1)/2;
iCbRS = ((MAX_KAICHO+1)/2*2*886-299*iRORS-587*iGORS+(886)
    *(iBORS+1))/(2*886) - (MAX_KAICHO+1)/2
    $\doteq$ (
        (
        ((MAX_KAICHO+1)/2 << bitSHIFT)
        - ((299<<bitSHIFT)+886)/(2*886)*iRORS
        - ((587<<bitSHIFT)+886)/(2*886)*iGORS
        + ((886<<bitSHIFT)+886)/(2*886)*iBORS
        + (1 << (bitSHIFT-1))
) >> bitSHIFT
) - (MAX_KAICHO+1)/2;
iCrRS=((MAX_KAICHO+1)/2*2*701-114*iBORS-587*iGORS+(701)
    *(iRORS+1))/(2*701) - (MAX_KAICHO+1)/2
    $\doteq$ (
        (
        ((MAX_KAICHO+1)/2 << bitSHIFT)
        + ((701<<bitSHIFT)+701)/(2*701)*iRORS
        - ((587<<bitSHIFT)+701)/(2*701)*iGORS
        - ((114<<bitSHIFT)+701)/(2*701)*iBORS
        + (1 << (bitSHIFT-1))
) >> bitSHIFT
) - (MAX_KAICHO+1)/2;

Please replace line 13, page 46, with the following line:

iCrRS= (((128<<12)-+2048^{x}iRORS-1715^{x}iGORS-333^{x}iBORS

Please replace the paragraph at line 18, page 46, with the following paragraph:

$$Y(o) = \left\lfloor \frac{(128 \times 2^{12}) + 1225 \times R(o) + 2404 \times G(o) + 467 \times B(o) + 2^{11}}{2^{12}} \right\rfloor - 128$$

$$Cb(o) = \left\lfloor \frac{(128 \times 2^{12}) - 691 \times R(o) - 1357 \times G(o) + 2^{11} \times B(o) + 2^{11}}{2^{12}} \right\rfloor - 128$$

$$Cr(o) = \left\lfloor \frac{(128 \times 2^{12}) + 2^{11} \times R(o) - 1715 \times G(o) - 333 \times B(o) + 2^{11}}{2^{12}} \right\rfloor - 128$$

Please replace line 10, page 51, with the following line:

iGORS=(((128<<12) + 4096^{x}iYOS - 1410^{x}iCbS - 2925^{x}iCrS

Please replace the paragraph at line 17, page 51, with the following paragraph:

$$R(o) = \left\lfloor \frac{(128 \times 2^{12}) + 2^{12} \times Y(o) + 5743 \times Cr(o) + 2^{11}}{2^{12}} \right\rfloor - 128$$

$$G(o) = \left\lfloor \frac{(128 \times 2^{12}) + 2^{12} \times Y(o) - 1410 \times Cb(o) + 2925 \times Cr(o) + 2^{11}}{2^{12}} \right\rfloor - 128$$

$$B(o) = \left\lfloor \frac{(128 \times 2^{12}) + 2^{12} \times Y(o) + 7258 \times Cb(o) + 2^{11}}{2^{12}} \right\rfloor - 128$$

Please replace lines 3-8, page 63, with the following lines:

R < 0:11,783 cases/ (256x256x256) colors $\fallingdotseq$ 0.07%

R <> 255:11,883 cases/ (256x256x256) colors $\fallingdotseq$ 0.07%

G < 0: 6,171 cases/ (256x256x256) colors $\fallingdotseq$ 0.04%

G <> 255: 6,117 cases/ (256x256x256) colors $\fallingdotseq$ 0.04%

B < 0:14,408 cases/ (256x256x256) colors $\fallingdotseq$ 0.09%

B <> 255:14,529 cases/ (256x256x256) colors $\fallingdotseq$ 0.09%

Please replace line 15, page 67, with the following line:

$< \alpha \times (\beta \, data+1) / \beta - 0.5$